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United States Government **Department of Energy**

memorandum

DATE: January 12, 2004

REPLY TO ATTN OF: Office of Air, Water and Radiation Protection Policy and Guidance (EH-41):Koss:6-7964

SUBJECT: Distribution of Clean Air Act Information Brief, "Hazardous Air Pollutant Major Source--Status and Implications for DOE Sites"

TO: Distribution

Because of the effects of hazardous air pollutants (HAPs) on public health and the environment, the 1990 Amendments to the Clean Air Act (CAA) place a good deal of emphasis on controlling emissions of HAPs. The attached EH-41 information brief discusses how a Department of Energy (DOE) site determines whether it is a major source of HAPs under Section 112 of the CAA, and what the implications are if the site is a major source. The intent behind the information brief is to increase awareness of the Environmental Protection Agency's overall regulatory strategy and the implementing details for the control of major sources of HAPs.

Questions concerning the attachment should be directed to Ted Koss (theodore.koss@eh.doe.gov; 202-586-7964) or Emile Boulos (emile.boulos@eh.doe.gov; 202-586-1306) of my staff.

Andrew Wallo
Director
Office of Air, Water and Radiation
Protection Policy and Guidance

Attachment

DISTRIBUTION: 01/08/04

"Distribution of Clean Air Act Information Brief, 'Hazardous Air Pollutant Major Source – Status and Implications for DOE Sites,'" Memorandum dated 1/12/04

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Hazardous Waste Remedial Action Program, (HAZWRAP)
Center for Environmental Management Information

Hazardous Air Pollutant Major Source Status and Implications for DOE Sites

Background:	The purposes of this information brief are to discuss how a Department of Energy (DOE) site determines whether it is a major source of hazardous air pollutants (HAPs) under §112 of the Clean Air Act (CAA), and what the implications are if the site is a major source of HAPs. The focus of the discussion is on CAA requirements as implemented in regulations issued by the Environmental Protection Agency (EPA); however, it is important to recognize that individual States may have more stringent requirements as authorized by 42 USC 7416. Section 112(b) of the CAA contains a list of HAPs and provides for periodic revision. The current list of HAPs subject to regulation under §112 can be accessed on the EPA Air Toxics web site at: <http://www.epa.gov/ttn/atw/pollsour.html>. Section 112(c)(1) of the CAA directs EPA to issue a list of categories and subcategories of major and area sources of HAPs. The initial list and subsequent revisions to the list can be accessed on the EPA web site at: <http://www.epa.gov/ttn/atw/socatlst/socatpg.html>. Section 112(d)(1) of the CAA directs EPA to issue emission standards for each category or subcategory of major sources and area sources of HAPs. The emission standards are found at 40 CFR Part 63 and are generally referred to as maximum achievable control technology (MACT) standards. The status of MACT standards for the various categories of major and area sources can be accessed at: <http://www.epa.gov/ttn/atw/mactfnl.html>.
Statute:	Clean Air Act §112, 42 USC 7412
Regulations:	40 CFR 63 Subpart A
References:	Memorandum from John Seitz, EPA, concerning "Potential to Emit for MACT Standards – Guidance on Timing Issues," May 16, 1995. Online at: <http://www.epa.gov/ttn/oarpg/t3/memoranda/pteguid.pdf>. *National Mining Association v. EPA*, 59 F.3d 1351 (D.C. Circuit 1995).

What are relevant definitions related to major source status?

Relevant definitions are in EPA's General Provisions for National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR 63.2):

Affected source - the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a §112(c) source category or subcategory for which a §112(d) standard or other relevant standard is established pursuant to §112 of the CAA. Each relevant standard will define the *affected source*, as defined in this paragraph unless a different definition is warranted based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the different definition would resolve those problems. The term *affected source*, as used in this part, is separate and distinct from any other use of that term in EPA regulations such as those implementing Title IV ["Acid Rain"] of the CAA. Affected source may be defined differently for part 63 than affected facility and stationary source in parts 60 and 61, respectively. This definition of *affected source*, and the procedures for adopting an alternative definition of *affected source*, shall apply to each §112(d) standard for which the initial proposed rule is signed by the EPA Administrator after June 30, 2002.

Area source - any stationary source of hazardous air pollutants that is not a major source as defined in this part.[1]

Fugitive emissions - those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under §112 of the CAA, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

Major source - any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the [EPA] Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

Potential to emit - the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

[1] On September 30, 2003, the Office of Air, Water and Radiation Protection Policy and Guidance (EH-41) released the memo and analysis, "Information and Guidance – the Environmental Protection Agency's Integrated Urban Air Toxics Strategy," (available at the DOE Environmental Policy and Guidance Web site at <http://tis.eh.doe.gov/oepa/guidance/caa/urbantoxics.pdf>) that focused on area source categories for HAPs.

Stationary Source - any building, structure, facility, or installation which emits or may emit any air pollutant.

The definition of the term *major source* at 40 CFR 63.2 is different than the definition of *major source* for purposes of new source review [40 CFR 51.165(a)(1)(iv)].

Determining the *potential to emit* is rather complicated. Several issues were discussed in the *National Mining Association v. EPA* case. EPA has elaborated on these and other issues in various guidance documents that can be found at <http://www.epa.gov/ttnatw01/pte/ptepg.html>. It is important to check this Web site as well as any potentially applicable State policies before calculating the *potential to emit.*

What are potential sources of HAPs?

Essentially all sources of HAPs from a stationary source or group of stationary sources are to be taken into account in determining whether a site or facility is a major source of HAPs. Example stationary sources include industrial boilers, stationary engines, laboratories, waste storage tanks, industrial processing activities, chemical and waste processing activities, site remediation activities, and demolition and construction activities.

The potential to emit HAPs must be taken into account in estimating HAP emissions and determining whether a source is a major or area source. In some cases, it may be possible for a site manager to negotiate a reduction in the potential to emit HAPs with the applicable regulatory agency by agreeing to keep actual HAP emissions well below the potential to emit and also below the 10/25 major source threshold. Such negotiations generally require substantial data justifying a reduction. If such a negotiation is successful, the site would need to meet area source requirements instead of major source requirements.

The definition of fugitive emissions makes clear that fugitive emissions as well as emissions from point sources are to be considered in determining whether a source is a major source for purposes of §112 of the CAA. In a November 2001 final rule related to the definition of the term *major source* under the CAA regulations for State operating permit programs (40 CFR 70.2), EPA reiterated that sources must continue to include fugitive emissions of all HAPs in determining major source status under §112 of the CAA (66 FR 59162; November 27, 2001). EPA's position that fugitive emissions are included in the major source definition under §112 of the CAA had previously been upheld in the *National Mining Association v. EPA* case.

How can HAP emissions be estimated?

In determining whether a DOE site is a major source of HAPs, potential emissions from all stationary sources at the site need to be estimated, totaled, and compared to the 10/25 major source threshold. EPA has several tools and information sources that can be used to estimate emissions. EPA's Air Clearinghouse for Inventories and Emission Factors (CHIEF) website (<www.epa.gov/ttn/chief/software/airchief>) provides access to air emission data specific to estimating the types and

quantities of pollutants that may be emitted from a variety of sources. EPA's WATER9 computer program provides an analytical model for estimating air emissions of individual waste constituents in wastewater collection, storage, treatment, and disposal facilities. Information on the WATER9 program is available at: <http://www.epa.gov/ttnchie1/software/water/index.html>. EPA policy memoranda and other guidance on major source determinations and potential to emit can be found at <www.epa.gov/ttn/oarpg> and on the EPA air toxics website at <www.epa.gov/ttn/atw>.

Is the distinction between a major source and an area source important?

The distinction between a major source and an area source of HAPs is important because an area source is typically subject to lesser emission control requirements or even no requirements. Additionally, all major sources are required to have an air operating permit, while area sources do not need an operating permit if they are not subject to a standard or other requirement under §112 of the CAA [40 CFR 71.3(a)(3)].

What is the "once in, always in policy"?

EPA's "once in, always in" policy is that a facility that installs pollution controls to meet a MACT standard and then falls below the major source threshold as a result of the installed controls cannot escape continued applicability of the MACT standard to the source by obtaining area source status. Once the MACT standard applies to a particular source, it will continue to apply.[2]

An exception to the policy applies in the case of remediation activities so as not to discourage such activities. EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) for site remediation activities (68 FR 58181; October 8, 2003) states that if emissions of HAPs from a remediation project cause a site to become a major source of HAPs, the site would have to meet applicable 40 CFR Part 63 MACT standards (for both remediation and non-remediation activities) during the time period the remediation project is underway. After the remediation project is completed, however, the HAP emissions from the remediation activity could be backed out of total site emissions of HAPs and the site could revert to being an area source of HAPs.

Can multiple MACT standards apply to a single DOE site?

If a DOE site is a major source of HAPs, any activity located on the site will be subject to an applicable NESHAP regardless of whether the activity by itself exceeds the emissions threshold to be a major source of HAPs (unless a specific NESHAP excludes certain sizes, classes, or types of sources)[3]. For example, a small industrial process cooling tower emitting 0.3 tons per year of chromium is subject to the major

[2] See the John Seitz 1995 memorandum in the references on page 1.

[3] For instance, in the NESHAP for the surface coating of miscellaneous metal parts and products (69 FR 130; January 2, 2004), a surface coating operation using less than 50 gallons each of several HAP-containing coatings totaling less than 250 gallons per year would always be exempt from the rule.

source NESHAP for industrial process cooling towers if the operation is located at a DOE site that is a major source of HAPs. Thus, all sources, no matter how small, that are located within the contiguous area of a site which is a major source of HAPs are considered major sources.

However, installation of pollution controls to meet a particular MACT standard may render a facility below the major source threshold for a future MACT standard. In the 1995 memorandum from John Seitz, EPA states that "if after compliance with a MACT standard, a source's potential to emit is less than the 10/25 tons per year applicability level, the EPA will consider the facility an area source for purposes of a subsequent standard."[4]

EPA has also determined that all portions and activities of a major source are subject to applicable MACT emission standards regardless of the number of source categories into which a facility is divided (59 FR 12411; March 16, 1994). Additionally, EPA has determined that §112 applies to entire contiguous adjacent sites without regard to whether the sites have activities in different Standard Industrial Classification codes. These EPA determinations were upheld in the *National Mining Association v. EPA* case.

Does the distinction between major and area sources apply to emissions of radionuclides and radon from DOE sites?

The distinction between major and area sources of HAPs derives from the 1990 Amendments to the CAA. Prior to passage of the 1990 Amendments, EPA had issued regulations under §112 of the CAA for emissions of radionuclides (40 CFR 61 Subpart H) and radon (40 CFR 61 Subpart Q) from DOE sites. The Subpart H and Q regulations remain in effect and are unaffected by the 1990 Amendments [CAA, §112(q)(1)]. The distinction between major and area sources consequently does not apply to the Subpart H and Q regulations. DOE sources subject to the Subpart H and Q requirements are also subject to EPA's operating permit requirements [40 CFR 71.3(a)(3)] for States in which EPA administers and enforces a full or partial operating permits program.

How can I get more information relating to major sources of HAPs?

Questions on major sources of HAPs should be directed to:

Ted Koss
202-586-7964
<theodore.koss@eh.doe.gov>

or Emile Boulos
202-586-1306
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Both are with EH-41.

[4] The John Seitz 1995 memorandum includes the following example to illustrate this: "A facility has degreasing operations which emit 30 tons per year of HAP. The same facility also has the potential to emit 5 tons/year of HAP from the coating of miscellaneous metal parts. After complying with the Halogenated Solvent Cleaning MACT, the maximum potential emissions from degreasing operations is 3 tons per year. The total federally enforceable potential emissions from this facility would now be 8 tons per year which meets the definition for an 'area source.' Therefore, this facility would not be subject to the major source requirements of the future metal parts MACT standard."